

PATENT COOPERATION TREATY

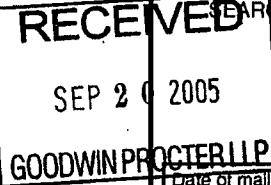
From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

TESTA, HURWITZ & THIBEAULT, L.L.P.  
Attn. Greenhalgh, Duncan A.  
High Street Tower  
125 High Street  
Boston, Massachusetts 02110  
UNITED STATES OF AMERICA

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION



(PCT Rule 44.1)

Applicant's or agent's file reference RIB-027PC	FOR FURTHER ACTION See paragraphs 1 and 4 below
International application No. PCT/US2004/017097	International filing date (day/month/year) 02/06/2004
Applicant RIB-X PHARMACEUTICALS, INC.	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

**When?** The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

**4. Reminders**


Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until **30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the International Searching Authority  European Patent Office, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Federico Bonomelli
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## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

#### What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

#### When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

#### How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

#### What documents must/may accompany the amendments?

##### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

## NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:  
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:  
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:  
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or  
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:  
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

### "Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

### Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

### Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>RIB-027PC</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/US2004/017097</b>	International filing date (day/month/year) <b>02/06/2004</b>	(Earliest) Priority Date (day/month/year) <b>03/06/2003</b>
Applicant  <b>RIB-X PHARMACEUTICALS, INC.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7 C07D263/20 A61K31/421

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 694 543 A (BAYER AG) 31 January 1996 (1996-01-31)  page 91 - page 94; claim 1 page 26, line 58 - page 27, line 11 -----	1-4, 8-11, 13, 26-28, 30, 32, 33, 35-37, 44-46
X	WO 01/81350 A (ASTRAZENECA AB; ASTRAZENECA UK LIMITED; GRAVESTOCK, MICHAEL, BARRY; BE) 1 November 2001 (2001-11-01)  page 127 - page 134; claim 1 page 139; claims 12, 13 -----	1-9, 12, 14, 16, 18, 20, 22, 24, 26-37, 44, 46
-/--		



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

**\* Special categories of cited documents:**

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

9 September 2005

Date of mailing of the international search report

16/09/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel: (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

F1nk, D

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/10566 A (BRISTOL-MYERS SQUIBB COMPANY) 2 March 2000 (2000-03-02) page 136 - page 155; claim 1 page 171; claim 7 -----	1
A	EP 0 352 781 A (E.I. DU PONT DE NEMOURS AND COMPANY) 31 January 1990 (1990-01-31) the whole document -----	1-48
A	BRICKNER S J: "OXAZOLIDINONE ANTIBACTERIAL AGENTS" CURRENT PHARMACEUTICAL DESIGN, BENTHAM SCIENCE PUBLISHERS, SCHIPHOL, NL, vol. 2, 1996, pages 175-194, XP001007528 ISSN: 1381-6128 the whole document -----	1-48
E	WO 2005/012271 A (RIB-X PHARMACEUTICALS, INC; WU, YUSHENG; CHEN, SHILI; CHEN, YI; HANSEL) 10 February 2005 (2005-02-10) page 83 - page 88; claim 1 page 25; compounds 17, 18 page 27; compounds 28,29 page 4, line 12 - line 28 -----	1-46

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## Continuation of Box II.1

Although claims 37-45 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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## Continuation of Box II.2

The present compound claims 1-3, 13-25 and 35 relate to "prodrugs" of the present compounds.

The use of this term leads to a lack of clarity (Article 6 PCT) because this term does not comprise any information as regards the structure of the compounds concerned. Accordingly, it is impossible to compare the said "prodrug" compounds with the compounds of the prior art.

Consequently, the said "prodrug" compounds have not been searched.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

international application no.  
PCT/US2004/017097

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 37-45 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.



Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0694543	A	31-01-1996	DE 4425612 A1	04-04-1996
			AU 699940 B2	17-12-1998
			AU 2498595 A	01-02-1996
			BG 99790 A	30-04-1996
			CA 2154025 A1	21-01-1996
			CN 1119647 A	03-04-1996
			CZ 9501872 A3	14-02-1996
			DZ 1912 A1	17-02-2002
			EE 9500045 A	15-02-1996
			EP 0694543 A1	31-01-1996
			FI 953477 A	21-01-1996
			HR 950408 A1	30-04-1997
			HU 75035 A2	28-03-1997
			IL 114626 A	17-08-1999
			JP 8041056 A	13-02-1996
			MA 23620 A1	01-04-1996
			NO 952865 A	22-01-1996
			NZ 272597 A	29-01-1997
			PL 309686 A1	22-01-1996
			RO 115262 B1	30-12-1999
			SG 33427 A1	18-10-1996
			SK 91795 A3	07-02-1996
			US 5627181 A	06-05-1997
			US 5843967 A	01-12-1998
			ZA 9506018 A	13-03-1996
WO 0181350	A	01-11-2001	AT 268778 T	15-06-2004
			AU 781784 B2	16-06-2005
			AU 4863601 A	07-11-2001
			BR 0110240 A	07-01-2003
			CA 2405349 A1	01-11-2001
			CN 1437603 A	20-08-2003
			CZ 20023527 A3	15-01-2003
			DE 60103754 D1	15-07-2004
			DE 60103754 T2	16-06-2005
			DK 1286998 T3	06-09-2004
			EE 200200598 A	15-04-2004
			EP 1286998 A1	05-03-2003
			ES 2220759 T3	16-12-2004
			WO 0181350 A1	01-11-2001
			HK 1053114 A1	18-02-2005
			HU 0300416 A2	28-06-2003
			JP 2003531211 T	21-10-2003
			MX PA02010453 A	25-04-2003
			NO 20025091 A	09-12-2002
			NZ 521765 A	28-05-2004
			PL 358326 A1	09-08-2004
			PT 1286998 T	30-09-2004
			SI 1286998 T1	31-10-2004
			TR 200402261 T4	21-12-2004
			US 2003216373 A1	20-11-2003
			ZA 200208187 A	11-02-2004
WO 0010566	A	02-03-2000	AU 748750 B2	13-06-2002
			AU 5783399 A	14-03-2000
			BR 9913225 A	22-05-2001
			CA 2341271 A1	02-03-2000
			CN 1314813 A	26-09-2001

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0010566	A		CZ 20010669 A3	15-08-2001
			EP 1107756 A1	20-06-2001
			HU 0103433 A2	28-01-2002
			ID 27690 A	19-04-2001
			JP 2002523369 T	30-07-2002
			NO 20010916 A	10-04-2001
			NZ 509867 A	29-08-2003
			PL 346267 A1	28-01-2002
			TR 200100672 T2	23-07-2001
			TW 572757 B	21-01-2004
			WO 0010566 A1	02-03-2000
			US 2002094984 A1	18-07-2002
			ZA 200101505 A	22-02-2002
EP 0352781	A	31-01-1990	US 4948801 A	14-08-1990
			AU 622465 B2	09-04-1992
			AU 3911589 A	01-02-1990
			CA 1337526 C	07-11-1995
			DK 374389 A	30-01-1990
			EP 0352781 A2	31-01-1990
			FI 893618 A	30-01-1990
			HU 58062 A2	28-01-1992
			IE 892438 L	29-01-1990
			JP 2124877 A	14-05-1990
			JP 2899319 B2	02-06-1999
			NO 893076 A	30-01-1990
			NZ 230108 A	25-10-1991
			PT 91315 A	08-02-1990
			US 5130316 A	14-07-1992
			US 5043443 A	27-08-1991
			US 5254577 A	19-10-1993
			ZA 8905778 A	27-03-1991
WO 2005012271	A	10-02-2005	US 2005043317 A1	24-02-2005
			WO 2005019211 A2	03-03-2005
			WO 2005012270 A2	10-02-2005
			WO 2005012271 A2	10-02-2005
			US 2005153971 A1	14-07-2005
			WO 2005061468 A1	07-07-2005

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY  
(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/US2004/017097

International filing date (day/month/year)  
02.06.2004

Priority date (day/month/year)  
03.06.2003

International Patent Classification (IPC) or both national classification and IPC  
C07D263/20, A61K31/421

Applicant  
RIB-X PHARMACEUTICALS, INC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



European Patent Office  
D-80298 Munich  
Tel. +49 89 2399 - 0 Tx: 523656 epmu d  
Fax: +49 89 2399 - 4465

Authorized Officer

Fink, D

Telephone No. +49 89 2399-8701



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/017097

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**Box No. I Basis of the opinion**

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1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/US2004/017097

**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 1-3 (all partly), 13-25 (all partly), 35 (partly), 37-45 (as regards industrial applicability)

because:

- ☒ the said international application, or the said claims Nos. 37-45 (as regards industrial applicability) relate to the following subject matter which does not require an international preliminary examination (*specify*):

**see separate sheet**

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 1-3 (all partly), 13-25 (all partly), 35 (partly)
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
  - the written form ☐ has not been furnished
  - ☐ does not comply with the standard
  - the computer readable form ☐ has not been furnished
  - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

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**Box No. V Reasoned statement under Rule 43b/s.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	1-3 (all partly), 4-12, 13-25 (all partly), 26-34, 35 (partly), 36-48
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-48
Industrial applicability (IA)	Yes: Claims	1-36, 46-48
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

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**Re Item III.**

1. The present **claims 37-45** relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT.  
Consequently, no opinion will be formulated with respect to *industrial applicability* of the subject-matter of these claims.

[ For the assessment of the aforesaid claims on the question whether they are industrially applicable, no unified criteria exist in the PCT. The patentability can also be dependent upon the formulation of the claims. The EPO, for example, does not recognize as industrially applicable the subject-matter of claims to the use of a compound in medical treatment, but will allow, however, claims to a (known) *compound for first use in medical treatment* and the *use* of such a compound *for the manufacture of a medicament* for a new medical treatment. ]

2. The expression "prodrug" as used in the present **claims 1-3, 13-25 and 35** is unclear in the sense of Article 6 PCT.  
This expression is a functional definition which does not comprise any information as regards the structure of the respective compounds.  
It was therefore impossible to compare the said "prodrug" compounds with what is set out in the prior art.  
Consequently, the International Search Report (ISR) was incomplete with respect to the said "prodrugs".

Insofar as the following letter refers to **claims 1-3, 13-25 and 35** it should only be taken to refer to the searched scope of the said claims (i.e., the *compounds* of the present general formula and the pharmaceutically acceptable *salts* and *esters* thereof).

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**Re Item V.**

Reference is made to the following documents:

- D1:** ..... EP-A-0694543 (31 January 1996);
- D2:** ..... WO-A-01/81350 (01 November 2001);
- D3:** ..... WO-A-00/10566 (02 March 2000);
- D4:** ..... EP-A-0352781 (31 January 1990);
- D5:** ..... *Current Pharmaceutical Design* 2(2), 175-194 (1996);
- D6:** ..... WO-A-2005/012271 (**10 February 2005**);

The current assessment is based on the assumption that all claims enjoy priority rights from the filing date of the priority document.

If it later turns out that this is not correct, the document **D6** as cited in the ISR could become relevant.

**1. NOVELTY (Article 33(2) PCT):**

The subject-matter of the present **claims 1-48** appears to be **novel** (Article 33(2) PCT):

There are overlaps between



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- (i) the present compound **claims 1-4, 8-11, 13, 26-28, 30, 32, 33 and 35** and the compound claim 1 of **D1** (cf., the compounds of **D1** wherein **D** represents a 6-membered aromatic heterocycle comprising at least one nitrogen atom which is substituted with phenyl or an 6-membered unsaturated heterocycle with up to two nitrogen atoms which, in turn, is substituted with C<sub>1-6</sub> alkyl which, in turn, is substituted with a group NR<sup>23</sup>R<sup>24</sup>, where R<sup>23</sup> represents a CH<sub>3</sub>-SO<sub>2</sub>- group),
- (ii) the present compound **claims 1-9, 12, 14, 16, 18, 20, 22, 24 and 26-35** and the compound claim 1 of **D2** (cf., the compounds of **D2** wherein **Q** is selected from Q1 or Q2 wherein T represents AR1 (cf., the "...optionally substituted phenyl...") or AR2 (cf., the "...optionally substituted 5- or 6-membered, fully saturated.....monocyclic heteroaryl ring..."), and
- (iii) the present compound **claim 1** and the compound claim 1 of **D3** (cf., the compounds of **D3** wherein **A** is selected from a) wherein Q is selected from ff) or hh) which groups may be substituted with -CH<sub>2</sub>-R<sub>80</sub> wherein R<sub>80</sub> represents -NR<sub>32</sub>R<sub>33</sub> where R<sub>32</sub> represents a CH<sub>3</sub>-SO<sub>2</sub>- group).

However, as the documents **D1 - D3** do not specifically disclose biphenyl etc. derivatives which are substituted with *alkylsulfonylaminoalkyl* or *alkylaminosulfonyl-alkyl* groups (cf., the definition of the present substituent group **M-X-L**), the corresponding present compounds may be regarded to represent a **novel selection** from the compounds of **D1 - D3**.

The documents **D4** (cf., pages 51-54, claim 1) and **D5** (cf., page 189, last paragraph - page 188, table V) do not teach biphenyl derivatives substituted with *alkylsulfonylaminoalkyl* or *alkylaminosulfonylalkyl* groups (cf., the definition of the present substituent group **M-X-L**).

The compounds of the present **claim 1** are thus also novel over **D4** and **D5**.

2. INVENTIVE STEP (Article 33(3) PCT):

The present application does not satisfy the criterion set forth in Article 33(3) PCT because the subject-matter of **claims 1-48** does not appear to involve an inventive step (Rule 65(1)(2) PCT):

The prior art **D1 - D3** discloses oxazolidinone (**D1** and **D2**) and isoxazolidinone compounds (**D3**) which are said to possess *antibacterial* activity.

There are overlaps between the present **claim 1** and the first claims of **D1- D3** (see, item 1 above).

The present compounds falling within this range of overlap represent a (novel) **selection** from the compounds of the first claims of **D1 -D3**

Such a selection, however, is only considered to involve an inventive step, if the compounds selected possess some **unexpected advantages** with respect to the range of compounds they are selected from (cf., the PCT INTERNATIONAL SEARCH AND PRELIMINARY EXAMINATION GUIDELINES; 25/03/2004, Chapter 13, items 13.14(e)(iv) and 13.14(f)(ii)).

Since at present no such properties are evident, it is considered that the compounds of the present **claims 1-14, 16, 18, 20, 22, 24** and **26-35** do not satisfy the criteria of Article 33(3)

PCT.

In view of the close structural relationship between the compounds of the prior art **D1- D5** and having regard to the fact that the prior art compounds are also useful as *antibacterial* agents, it is considered that the compounds of the present **claim 1** - which do **not** fall within the said range of overlap - have to be regarded to be **obvious alternatives** to the compounds of the prior art **D1 - D5**.

- [ 1. 3-(*Biphenyl* or *Pyridinylphenyl*)-5-(*triazol-1-ylmethyl*)-2-oxo-oxazolidine derivatives (cf., the present **claims 1-9, 12, 14, 16, 18, 20, 22 and 24**) are known from **D2**;
- 2. 5-(*acetylaminomethyl*)-3-(*biphenyl* or *pyridinylphenyl*)-2-oxo-oxazolidine derivatives (cf., the present **claims 1-11 and 13-25**) are known from **D4** (cf., claim 1) and **D5** (see, e.g. the tables VIII and IX);
- 3. it is known from **D2** (cf., the definitions of  $R^2$  and  $R^3$  according to claim 1 of **D2**) and **D5** (cf., page 187, Figure 2) and that the 3-phenyl group may have *one or two* *fluorine* substituents at its 3 and/or 5-position (cf., the present **claims 1, 6, 7 and 14-25**);
- 4. it is further known from **D2** (cf., the "optionally substituted" AR1 and AR2 rings according to claim 1 of **D2**) and **D5** (cf., page 187, Figure 2; and page 189, column 2, last paragraph - page 190, column 1, table VIII) that the distal phenyl ring of the 3-biphenyl group may be further substituted (i.e., with *all kind* of substituent groups) (cf., the present **claims 1 and 26-34**); and
- 5. it is furthermore known from **D1** cf., the compounds of **D1** wherein **D** represents a 6-membered aromatic heterocycle comprising at least one nitrogen atom which is substituted with phenyl or an 6-membered unsaturated heterocycle with up to two nitrogen atoms which, in turn, is substituted with  $C_{1-6}$  *alkyl* which, in turn, is substituted with a group  $NR^{23}R^{24}$  where  $R^{23}$  represents a  $CH_3-SO_2-$  group), and **D3** (cf., the compounds of **D3** wherein **A** is selected from a) wherein Q is selected from

ff) or hh) which groups may be substituted with  $-CH_2-R_{80}$  wherein  $R_{80}$  represents - $NR_{32}R_{33}$  where  $R_{32}$  represents a  $CH_3-SO_2$ - group) that the distal phenyl ring of the 3-(phenylpyridinyl) group (**D1**) or the 3-biphenyl group (**D3**) may be substituted with a methylsulfonylaminoalkyl group (cf., the present **claims 1, 26-28, 30, 32 and 33.** ]

The skilled person would thus have expected that the compounds of the present **claims 1-35** are also useful as *antibacterial* agents.

Consequently, it is considered that the compounds of the present **claims 1-35** do not involve an inventive step as set forth in Article 33(3) PCT.

### 3. INDUSTRIAL APPLICABILITY (Article 33(4) PCT):

The subject-matter of the present **claims 1-36 and 46-48** concerns chemical compounds, pharmaceutical compositions, a chemical process and a medical device and is therefore considered to be industrial applicable in the sense of Article 33(4) PCT.

### 4. MISCELLANEOUS:

- 4.1. The documents **D1 - D5** should have been cited (Rule 5.1(a)(ii) PCT).
- 4.2. Claim 35 contains a reference to the description. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

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- 4.3. Process claim 46 is unclear because it does not comprise any process features (Article 6 PCT; clarity)
- 4.4. The passage on page 5, last paragraph - page 6, first paragraph - referring to *N-oxide*, *N-hydroxy* and *N-alkoxy* derivatives of the present nitrogen containing compounds - creates an inconsistency between the claims and the description (the present claims do not comprise any information as regards these N-oxy derivatives). This inconsistency leads to a doubt concerning the extent of protection sought, thus rendering the claims unclear, contrary to Article 6 PCT.
- 4.5. The statements on pages 1 (cf., lines 2-3) and 54 (lines 7-16), concerning  
(i) the incorporation of patent documents and scientific articles and  
(ii) the scope of the present invention  
are obviously irrelevant and unnecessary in the sense of Rule 9.1(iv) PCT.